

Work Order # _____ Job # _____ Activity # _____

1. Work requester fills out this section

STANDING WORK PERMIT ☐

Requester: P. Kroon Date: 4/2/04 Ext. 5114 Dept/Div/Group: PO/PHENIX
Other Contact person (if different from requester): S. MARINO Ext. 3704
Work Control Coordinator P. KROON Start Date 4/5/04 Est. End Date 4/7/04
Description of Work / Problem: Remove and replace electronic cards from G/C-Link crates mounted on back of south muon magnet. Work will be performed during RHIC restricted access period, using The PHENIX vertical man-lift.

Building 1008 Room IR Equipment N/A Service Provider C-A Staff

2. Work requester, service provider, and ES&H (as necessary) fill out this section or attach analysis

ES&H Analysis

RADIATION CONCERNS ☒ NONE ☐ Activation ☐ Airborne ☐ Contamination ☐ Radiation ☐ OTHER _____
☐ Special nuclear materials involved, notify Isotope Special Materials Group ☐ Fissionable materials involved, notify Laboratory Criticality Officer

SAFETY CONCERNS ☐ NONE

<input type="checkbox"/> Adding / Removing Walls or Roofs	<input type="checkbox"/> Confined Space*	<input checked="" type="checkbox"/> Explosives	<input type="checkbox"/> Lead*	<input type="checkbox"/> Penetrating Fire Wall
<input type="checkbox"/> Asbestos*	<input type="checkbox"/> Corrosive	<input checked="" type="checkbox"/> Flammable Gases	<input type="checkbox"/> Magnetic Field	<input type="checkbox"/> Pressurized Systems
<input type="checkbox"/> Beryllium*	<input type="checkbox"/> Cryogenic	<input type="checkbox"/> Fumes/Mist/Dust*	<input type="checkbox"/> Material Handling	<input type="checkbox"/> Rigging/Critical Lift
<input type="checkbox"/> Biohazard*	<input checked="" type="checkbox"/> Electrical	<input type="checkbox"/> Heat/Cold Stress*	<input type="checkbox"/> Noise*	<input type="checkbox"/> Toxic Materials*
<input type="checkbox"/> Chemicals*	<input checked="" type="checkbox"/> Elevated Work*	<input type="checkbox"/> Hydraulic	<input type="checkbox"/> Non-ionizing Radiation	<input type="checkbox"/> Vacuum
	<input type="checkbox"/> Excavation	<input type="checkbox"/> Lasers*	<input type="checkbox"/> Oxygen Deficiency*	<input type="checkbox"/> OTHER _____

*Does this work require medical clearance or surveillance from the Occupational Medicine Clinic? ☐ Yes ☒ No

ENVIRONMENTAL CONCERNS ☒ NONE

<input type="checkbox"/> Atmospheric Discharges (rad/non-rad)	<input type="checkbox"/> Liquid Discharges	<input type="checkbox"/> Work impacts Environmental Permit No. _____
<input type="checkbox"/> Chemical or Rad Material Storage or Use	<input type="checkbox"/> Oil / PCB Management	<input type="checkbox"/> Soil activation/contamination
<input type="checkbox"/> Cesspools (UIC)	<input type="checkbox"/> Protected areas / species	<input type="checkbox"/> Waste - Clean
<input type="checkbox"/> High water / power consumption	<input type="checkbox"/> Spill potential	<input type="checkbox"/> Waste - Hazardous
		<input type="checkbox"/> Waste - Industrial
		<input type="checkbox"/> Waste - Mixed
		<input type="checkbox"/> Waste - Radioactive
		<input type="checkbox"/> Waste - Regulated Medical
		<input type="checkbox"/> OTHER _____

Waste disposition by: _____

POLLUTION PREVENTION (P2) / WASTE MINIMIZATION OPPORTUNITY: ☒ None ☐ Yes

Facility Concerns ☒ NONE

<input type="checkbox"/> Access/Egress Limitations	<input type="checkbox"/> Impacts Facility Use Agreement	<input type="checkbox"/> Temperature Change	<input type="checkbox"/> OTHER _____
<input type="checkbox"/> Configuration Control	<input type="checkbox"/> Maintenance Work on Ventilation Systems	<input type="checkbox"/> Utility Interruptions	
<input type="checkbox"/> Electrical Noise	<input type="checkbox"/> Potential to Cause a False Alarm	<input type="checkbox"/> Vibrations	

Work Controls

WORK PRACTICES ☐ NONE ☐ Exhaust Ventilation ☒ Lockout/Tagout ☐ Spill Containment
☐ Back-up Person/Watch ☐ HP Coverage ☐ Posting/Warning Signs ☐ Time Limitation
☐ Barricades ☐ IH Survey ☐ Scaffolding - requires inspection ☐ Warning alarm (i.e. "high level")

PROTECTIVE EQUIPMENT ☐ NONE ☐ Ear Plugs ☐ Gloves ☐ Lab Coat ☐ Safety Glasses
☐ Coveralls ☐ Ear Muffs ☐ Goggles ☐ Respirator ☒ Safety Harness
☐ Disposable Clothing ☐ Face Shield ☐ Hard Hat ☐ Shoe covers ☐ Safety Shoes ☐ OTHER _____

PERMITS

REQUIRED ☒ NONE ☐ Cutting/Welding ☐ Impair Fire Protection Systems
(Please attach) ☐ Concrete/Masonry Penetration ☐ Digging/Core Drilling ☐ Rad Work Permit - RWP No. _____
☐ Confined Space Entry ☐ Electrical Working Hot ☐ OTHER _____

DOSIMETRY/ MONITORING

<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> Heat Stress Monitor	<input type="checkbox"/> Real Time Monitor	<input type="checkbox"/> TLD
<input type="checkbox"/> Air Effluent	<input type="checkbox"/> Noise Survey/Dosimeter	<input type="checkbox"/> Self-reading Pencil Dosimeter	<input type="checkbox"/> Waste Characterization
<input type="checkbox"/> Ground Water	<input type="checkbox"/> O ₂ /Combustible Gas	<input type="checkbox"/> Self-reading Digital Dosimeter	<input type="checkbox"/> OTHER _____
<input type="checkbox"/> Liquid Effluent	<input type="checkbox"/> Passive Vapor Monitor	<input type="checkbox"/> Sorbent Tube/Filter Pump	

Training Requirements (List below any location specific training requirements)

Based on analysis above, the Walkdown Team determines the risk, complexity, and coordination ratings below.

ES&H Risk Level: LOW ☒ MODERATE HIGH

Complexity Level: ☒ LOW MODERATE HIGH

Work Coordination: LOW ☒ MODERATE HIGH

Note: If all the ratings are LOW, the Work Control Coordinator and Service Provider must sign for concurrence on the back side. Further review of the work permit is not required. If any ratings are MODERATE or HIGH, the entire permit must be completed.

3. Both work requester and service provider coordinate on work plan (use attachments for detailed plans)

Work Plan: (procedures, timing, equipment, and personnel availability need to be addressed)

See attached.

Special Working Conditions Required: NONE

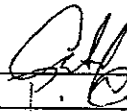
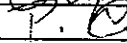
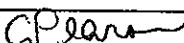
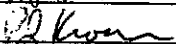
Operational Limits Imposed: NO

Post Work Testing Required: NO

Job Safety Analysis Required Yes ☒ No

Walkdown Required Yes ☒ No

Reviewed By: Primary Reviewer will determine the size of the review team and the other signatures required based on hazards and job complexity. Primary Reviewer signature means that the hazards and risks that could impact ES&H have been identified and will be controlled according to BNL requirements.


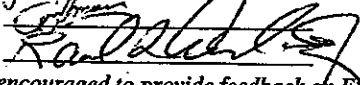
Title	Name (print)	Signature	Life #	Date
Primary Reviewer	Arthur J. Piper		18661	4/2/04
ES&H Professional	P. Cunningham		21868	4/2/04
Other				
Other	C. Pearson		15245	4/2/04
Work Control Coordinator*	P. Kroon		17500	4/2/04
Service Provider*				

*Only signatures required for concurrence on LOW rated jobs.

Review done: in series team

4. Job site personnel fills out this section

Note: Signature indicates personnel performing work have read and understand the hazards and permit requirements (including attached permits).

Job Site Supervisor		Contractor Supervisor	
Workers: Michael J. Reibel	Life # L6206	Workers:	Life #
John Hill (SL)	H0652		
	U8234		

Workers are encouraged to provide feedback on ES&H concerns or on ideas for improved job work flow. Use feedback form or space below.

5. Work Requester or designee fills out this section

Conditions are Appropriate to Start Work: (Work permit has been reviewed, work controls are in place, and site is ready for job.)

Name P. Kroon Signature  Life # 17500 Date 4/5/04

6. Work Requester determines if Post Job Review is required ☒ No Yes (Fill in names of reviewers)

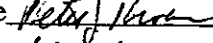
Post Job Review:

Name:	Signature	Life #:	Date:
Name:	Signature	Life #:	Date:

7. Worker provides feedback

Worker Feedback: NONE

8. Work Control Coordinator (requesting dept.) checks quality of completed permit and closes out

Closeout: Name P. Kroon Signature  Life #: 17500 Date: 4/7/04

Comments: Didn't need to open large rolling door.

Work Plan Attachment

WP# 552004-039

Remove and Repair electronic cards from C-link/G-link crates on south muon magnet in PHENIX IR, Bldg. 1008.

This work is to be done during the three-day RHIC restricted access period, by fully trained and experienced personnel. Since the crates are located on the back of the south muon magnet (MMS) at heights of up to 26 feet, the vertical man-lift will be moved into the IR for this job, and removed upon completion. Flammable gas will be present in detectors in the IR, but not in the vicinity of the work. All work in the IR will be supervised by Sal Marino, under the cognizance of the PHENIX shift leader (SL).

- Ensure that the power to the Crates is secured and the MMS magnet power key is locked out of use (Marino, SL)).
- Ensure that the 12-ton IR Crane is locked out (Marino).
- Roll the vertical man lift into the IR through the plug door if possible. If not, the large rolling door may be opened temporarily, but closed again after the lift is inside (Marino).
- Roll the man lift into position behind the MMS and use it to access the crates (Marino, M. Leitch).
- Work will involve removal, repair and replacement of defective cards (Leitch).
- Upon completion of the work, the man lift will be removed from the IR (Marino).